



TEW
A772179

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Girish Kumar Muralidharan et al.

Serial No.: 10/681,730

Filed: October 8, 2003

For: METHOD AND APPARATUS FOR
SELECTIVELY BLOCKING
REMOTE ACTION

§
§
§
§
§
§
§
§
§
§

Group Art Unit: 2179

Confirmation No.: 6712

Examiner: Augustine, Nicholas

Atty. Docket: GEMS:0242/YOD/RAR
137299-1

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF TRANSMISSION OR MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. § 1.6(d), or is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4), or is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

September 5, 2007

Date

Eddie Lou Robinson
Eddie Lou Robinson

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§41.31 AND 41.37

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on June 29, 2007, and received by the Patent Office on July 5, 2007. The Commissioner is authorized to charge the requisite fee of \$500.00, and any additional fees which may be necessary to advance prosecution of the present application, to Account No. 50-2402, Order No. 137299-1/YOD (GEMS:0242).

09/07/2007 FHETEKI1 00000031 502402 10681730

01 FC:1402 500.00 DA

1. **REAL PARTY IN INTEREST**

The real party in interest is GE Medical Technology Services, Inc., the Assignee of the above-referenced application by virtue of the Assignment to GE Medical Technology Services, Inc. by Girish Kumar Muralidharan and David Matthew Deaven, recorded at reel 014597, frame 0770, and dated October 8, 2003. Accordingly, GE Medical Technology Services, Inc., will be directly affected by the Board's decision in the pending appeal.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 1-5, 7, 8, 10-14, 16, 17, 19-33, 36 and 37 are currently pending, are currently under final rejection and, thus, are the subject of this Appeal.

4. **STATUS OF AMENDMENTS**

Amendments to claims 10-14, 16 and 17 are outstanding. Accordingly, in view of the arguments presented below, Appellants request the Board to consider these claims in view of these unentered but outstanding amendments.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention relates generally to remote configuration and observation of a mechanical and/or radiological system. More specifically, the present invention relates to the remote configuration and or servicing of a medical imaging system while retaining local control of the movement and/or operation of the system. *See*, Application, page 1, lines 5-8.

The Application contains eight independent claims, namely, claims 1, 7, 10, 16, 19, 28, 36 and 37, all of which are the subject of this Appeal. The subject matter of these claims is summarized below.

With regard to the aspect of the invention set forth in independent claim 1, discussions of the recited features of claim 1 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 1 provides a method for limiting remote display of a local system user interface. The method comprises designating one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions. *See*, Application, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15; *see also* Figs. 2-4. The system user interface controls the operation of a medical imaging system (e.g., 10) and is displayed (e.g., 54) on a local operator workstation (e.g., 22). *See, id.* at p. 5, lines 29-31, p. 6, lines 17-18, p. 10, lines 9-20; *see also* Figs. 2 and 3. Further, the method comprises modifying the limited remote access interface regions present in screen data (e.g., 66) sent to a remote operator workstation (e.g., 24) for display. *See id.* at p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-6, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15, 30-31, p. 12, lines 1-3 ; *see also* Figs. 2 and 4. The method further comprises displaying the modified interface regions at the remote operator workstation (e.g., 24), wherein the modified interface regions visually differ when displayed from respective unmodified interface regions and wherein the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation. *See id.* p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-6, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15, 30-31, p. 12, lines 1-3 ; *see also* Figs. 2-4.

With regard to the aspect of the invention set forth in independent claim 7, discussions of the recited features of claim 7 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 7 provides a method for limiting remote operation of a local

system user interface. The method comprises designating one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions. *See*, Application, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15; *see also* Figs. 2-4. The system user interface controls the operation of a medical imaging system (e.g., 10). *See, id.* at p. 5, lines 29-31, p. 6, lines 17-18, p. 10, lines 9-20; *see also* Figs. 2 and 3. The method further comprises identifying one or more restricted remote inputs (e.g., 74) in an input stream to a local system using the system user interface, wherein the one or more restricted remote inputs are generated via interaction at a remote operator workstation (e.g., 24) with the one or more limited remote access interface regions. *See id.* at p. 9, lines 26-31, p. 10, lines 1-4, p. 11, lines 6-15; *see also* Figs. 2 and 4. The method further comprises removing the one or more restricted remote inputs from the input stream to the local system, wherein removing the one or more restricted remote inputs prevents remote activation of the medical imaging system. *See id.* at p. 7, lines 9-17, p. 11, lines 10-15, 31, p. 12, lines 1-3; *see also* Fig. 2.

With regard to the aspect of the invention set forth in independent claim 10, discussions of the recited features of claim 10 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 10 provides one or more computer readable storage media having a computer program stored thereon. *See* Application, p. 6, lines 6-14. The computer program comprises a routine for designating one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions. *See*, Application, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15; *see also* Figs. 2-4. The system user interface controls the operation of a medical imaging system (e.g., 10) and is displayed (e.g., 54) on a local operator workstation (e.g., 22). *See, id.* at p. 5, lines 29-31, p. 6, lines 17-18, p. 10, lines 9-20; *see also* Figs. 2 and 3. Further, the computer program comprises a routine for modifying the limited remote access interface regions present in screen data (e.g., 66) sent to a remote operator workstation (e.g., 24) for display, wherein the modified

interface regions visually differ from respective unmodified interface regions when displayed and wherein the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation. *See id.* at p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-6, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15, 30-31, p. 12, lines 1-3 ; *see also* Figs. 2-4.

With regard to the aspect of the invention set forth in independent claim 16, discussions of the recited features of claim 16 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 16 provides one or more computer readable storage media having a computer program stored thereon. *See* Application, p. 6, lines 6-14. The computer program comprises a routine for designating one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions. *See*, Application, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15; *see also* Figs. 2-4. The system user interface controls the operation of a medical imaging system (e.g., 10). *See, id.* at p. 5, lines 29-31, p. 6, lines 17-18, p. 10, lines 9-20; *see also* Figs. 2 and 3. The computer program further comprises a routine for identifying one or more restricted remote inputs (e.g., 74) in an input stream to a local system using the system user interface, wherein the one or more restricted remote inputs are generated via interaction at a remote operator workstation (e.g., 24) with the one or more limited remote access interface regions. *See id.* at p. 9, lines 26-31, p. 10, lines 1-4, p. 11, lines 6-15; *see also* Figs. 2 and 4. Further, the computer program comprise a routine for removing the one or more restricted remote inputs from the input stream to the local system, wherein removing the one or more restricted remote inputs prevents remote activation of the medical imaging system. *See id.* at p. 7, lines 9-17, p.11, lines 10-15, 31, p. 12, lines 1-3; *see also* Fig. 2.

With regard to the aspect of the invention set forth in independent claim 19, discussions of the recited features of claim 19 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in

accordance with claim 19 provides a remote viewing system. The remote viewing system comprises a local medical imaging system (e.g., 10) comprising an imager (e.g., 12) configured to detect one or more signals which may be converted into a physiological image. *See* Application, p. 4, lines 25-31; *see also* Fig. 1. The remote viewing system further comprises one or more data acquisition circuits (e.g., 18) configured to receive and process the one or more signals from the imager, one or more system control circuits (e.g., 16) configured to control one or more of the imager and the data acquisition circuits, and at least one local operator workstation (e.g., 22) configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices. *See id.* at p. 5, lines 1-31, p. 6, lines 1-14; *see also* Figs. 1 and 2. The remote viewing system further comprise a remote operator workstation (e.g., 24) configured to receive at least the one or more processed signals via a network (e.g., 26) connection. *See id.* at p. 6, lines 22-30; p. 7, lines 1-7; *see also* Figs. 1 and 2. The remote viewing system further comprises a limited communication module (e.g., 50) located on at least one of the network connection (e.g., 26) or the local medical imaging system (e.g., 10), wherein the limited communication module may be configured to designate one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions and wherein the system user interface controls the operation of the local medical imaging system and is displayed on the local operator workstation (e.g., 22), and to modify the limited remote access interface regions present in screen data (e.g., 66) sent to the remote operator workstation (e.g., 24) such that the modified interface regions visually differ from the respective unmodified interface regions when displayed and such that the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation. *See, id.* at p. 5, lines 29-31, p. 6, lines 17-18, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 9-31, p. 11, lines 1-15, 30-31, p. 12, lines 1-3; *see also* Figs. 2-4.

With regard to the aspect of the invention set forth in independent claim 28, discussions of the recited features of claim 28 can be found at least in the below cited

locations of the specification and drawings. By way of example, an embodiment in accordance with claim 28 provides a remote input system for a medical imaging system. The remote input system comprises a local medical imaging system (e.g., 10) comprising an imager (e.g., 12) configured to detect one or more signals which may be converted into a physiological image. *See* Application, p. 4, lines 25-31; *see also* Fig. 1. The remote input system further comprises one or more data acquisition circuits (e.g., 18) configured to receive and process the one or more signals from the imager, one or more system control circuits (e.g., 16) configured to control one or more of the imager and the data acquisition circuits, and at least one local operator workstation (e.g., 22) configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices. *See id.* at p. 5, lines 1-31, p. 6, lines 1-14; *see also* Figs. 1 and 2. The remote input system further comprises a remote operator workstation (e.g., 24) configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits (e.g., 16) via a network connection (e.g., 26). *See id.* at p. 6, lines 22-30; p. 7, lines 1-7; *see also* Figs. 1 and 2. The remote input system further comprises a limited communication module (e.g., 50) located on at least one of the network connection (e.g., 26) or the local medical imaging system (e.g., 10), wherein the limited communication module may be configured to designate one or more interface regions (e.g., 56, 58, 60) of a system user interface as limited remote access interface regions, to identify one or more restricted remote inputs (e.g., 74) in an input stream to the local medical imaging system using the system user interface, wherein the one or more restricted remote inputs are generated via interaction at the remote operator workstation (e.g., 24) with the one or more limited remote access interface regions, and to remove the one or more restricted remote inputs from the input stream to the local medical imaging system, wherein removing the one or more restricted remote inputs prevents remote activation of the local medical imaging system. *See*, Application, p. 7, lines 9-17, p. 8, lines 12-13, 19-31, p. 9, lines 1-9, 13-16, 26-31, p. 10, lines 1-4, 22-31, p. 11, lines 1-15, 31, p. 12, lines 1-3; *see also* Figs. 2-4.

With regard to the aspect of the invention set forth in independent claim 36, discussions of the recited features of claim 36 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 36 provides a method for limiting remote access to a medical imaging system (e.g., 10). The method comprises differentiating functionality of a system user interface based on proximity of an operator workstation (e.g., 22, 24) to a medical imaging device (e.g., 12). *See id.* at p. 7, lines 9-17, p. 8, lines 12-31, p. 9, lines 1-6, 13-16, 26-31; p. 10, lines 1-31, p. 11, lines 1-17, 30-31, p. 12, lines 1-3; *see also* Figs. 2-4.

With regard to the aspect of the invention set forth in independent claim 37, discussions of the recited features of claim 37 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with claim 37 provides a remote access system for a medical imaging system. The remote access system comprises a local medical imaging system (e.g., 10) comprising an imager (e.g., 12) configured to detect one or more signals which may be converted into a physiological image. *See Application*, p. 4, lines 25-31; *see also* Fig. 1. The remote access system further comprises one or more data acquisition circuits (e.g., 18) configured to receive and process the one or more signals from the imager, one or more system control circuits (e.g., 16) configured to control one or more of the imager and the data acquisition circuits, and at least one local operator workstation (e.g., 22) configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices. *See id.* at p. 5, lines 1-31, p. 6, lines 1-14; *see also* Figs. 1 and 2. The remote access system further comprises a remote operator workstation (e.g., 24) configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits (e.g., 16) via a network connection (e.g., 26). *See id.* at p. 6, lines 22-30; p. 7, lines 1-7; *see also* Figs. 1 and 2. The remote input system further comprises a limited communication module (e.g., 50) configured to provide different functionality to the one or more local operator workstations and the remote operator workstation. *See id.* at p. 7,

lines 9-17, 23-25, p. 8, lines 12-31, p. 9, lines 1-6, 13-16, 26- 31; p. 10, lines 1-31, p. 11, lines 1-17, 30-31, p. 12, lines 1-3; *see also* Figs. 2-4.

A benefit of the invention, as recited in these claims, is the ability to allow some functionality on a medial imaging system via a remote workstation without allowing full functionality at the remote site. For example, remote configuration or monitoring of an imaging system may be allowed without allowing remote activation of the imaging system. Further, the technique provides for partially or completely masking portions of the system interface which the remote operator may not operate or does not need to see. In this manner, information not for service or instructional purposes, such as private patient information, may be masked from the remote operator. In addition, actions taken by the remote operator in the prohibited or limited portions of the interface may be filtered upon transmission to the system, thereby preventing execution of a limited or prohibited action from the remote site, while still allowing the action from a local site, such as a site in view of the imaging system. This is a clear difference and distinction from the prior art, as discussed below.

6. **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

First Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 10-17 under 35 U.S.C. §101 as being directed to non-statutory subject matter.

Second Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claim 36 under 35 U.S.C. §101 as being directed to non-statutory subject matter.

Third Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's third ground of rejection in which the Examiner rejected claims 1-5, 7, 8, 10-14, 16, 17, 19-33 and 37 under 35 U.S.C. §103(a) as being unpatentable over Miller et al., (U.S. Patent No. 5,550,968, referred to herein as "Miller") in view of Lounsberry et al., (U.S. Patent No. 6,325,540, referred to herein as "Lounsberry").

Fourth Ground of Rejection for Review on Appeal:

Appellants respectfully urge the Board to review and reverse the Examiner's fourth ground of rejection in which the Examiner rejected claim 36 over Goertzel et al., (U.S. Patent No. 6,308,273, referred to herein as "Goertzel") in view of Lounsberry.

7. **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Sections 101 and 103. Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1-5, 7, 8, 10-14, 16, 17, 19-33, 36 and 37 are currently in condition for allowance.

A. **Ground of Rejection No. 1:**

With respect to the rejection under Section 101 of claims 10-17 under U.S.C. §101 the Examiner stated in the Final Office Action the following:

The claims recite "A computer program, provided on one or more tangible computer readable media", thus it is the "A computer program" that is claimed, not the "tangible computer readable media". It does not matter where the "computer program" is provided on, it's still the computer program is being claimed, thus this renders to be non-statutory. Consider the phrase "A computer readable

storage medium having a computer program stored thereon...”, in this example the applicant claims “a computer readable storage media” which is statutory.

See, Final Office Action, pp. 2, 3.

Appellants respectfully traverse the rejection.

Appellants respectfully direct the Board to an Amendment and Response filled by the Appellants on May 29, 2007, in which the Appellants amended claims 10-14, 16 and 17 to recite “[o]ne or more computer readable storage media having a computer program stored thereon,” as suggested by the Examiner in the Final Office Action. However, as indicated in the Advisory Action mailed on June 18, 2007, the Examiner did not enter the proposed claim language. Instead, the Examiner stated that the term “computer readable storage media” is not disclosed in the specification, raising “a new 112 issue.” *See*, Advisory Action, page 2.

In contrast to the Examiner’s assertion, Appellants direct the Board to the specification, which discloses that:

...the local operator interface station 22 may comprise or communicate with *a memory or data storage component* for storing programs and routines executed by the local interface station 22 or by associated components of the system 10. It should be understood that any type of computer accessible memory or storage device capable of storing the desired amount of data and/or code may be accessed by the local operator workstation 22. Moreover, *the memory or storage device may comprise one or more memory devices, such as magnetic or optical devices*, of similar or different types, which may be local and/or remote to the system 10.

Application, p. 6, lines 5-14. Emphasis added.

Hence, Appellants submit that by disclosing magnetic and/or optical memory devices, the specification clearly supports the limitation reciting “computer readable storage media.” Therefore, the Examiner’s presumption that an issue under 35 U.S.C §112 may arise by incorporating the aforementioned recitation is baseless. For at least these reasons, Appellants request that the Board enter and consider the outstanding amendments to claims 10-14, 16 and 17 that are based on the claim language previously suggested by the Examiner. Furthermore, Appellants request the Board to reverse the Examiner’s rejection of claims 10-14, 16 and 17 under 35 U.S.C. §101 in view of the proposed amendments, which address the §101 issue raised by the Examiner in the Final Rejection.

B. Ground of Rejection No. 2:

With respect to the rejection under 35 U.S.C. §101 of claim 36, the Examiner indicated in the Final Office Action that the claim “relates to an abstract idea, which falls under the category of being non-statutory.” *See*, Final Office Action, page 3. Appellants respectfully traverse this rejection.

According to the Supreme Court, congress intended statutory subject matter to “include anything under the sun that is made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 308-09; 206 U.S.P.Q. 193, 197 (1980). Exclusions of statutory subject matter are limited to laws of nature, natural phenomena and abstract ideas. *See Diamond v. Diehr*, 450 U.S. 175, 185; 209 U.S.P.Q. 1, 7 (1981). Other than these specific exceptions, therefore, nearly anything man made is statutorily patentable subject matter under 35 U.S.C. §101.

In determining when process or method claims include statutory subject matter, the Supreme Court in *Diehr* stated that “[t]ransformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.” *See id.* 450 U.S. at 183-185, 209 U.S.P.Q. at 6. In addition

to the Supreme Court's transformation and reduction test, the Federal Circuit has developed a second test which may also be used to determine if a claim recites statutory subject matter, namely does the claim produce a "useful, concrete, and tangible result." *In re Alappat*, 31 U.S.P.Q.2d 1545, 1557 (Fed. Cir. 1994) (*en banc*). The Federal Circuit further elaborated on this second test by holding that one must look to "the essential characteristics of the subject matter, in particular, its practical utility." *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 U.S.P.Q.2d 1596, 1602 (Fed. Cir. 1998).

However, explaining this "useful, concrete, and tangible" test, the Federal Circuit has stated "the dispositive inquiry is whether the claim as a whole is directed to statutory subject matter." *In re Alappat*, 31 U.S.P.Q.2d at 1557. Indeed, there has been no requirement from Congress, the Supreme Court, or the Federal Circuit mandating that a specific final result be shown for a claim to qualify under Section 101. *See id.* Rather, the Federal Circuit has specifically stated "the Alappat inquiry simply requires an examination of the contested claims to see if the claimed subject matter as a whole is a disembodied mathematical concept representing nothing more than a 'law of nature' or an 'abstract idea,' or if the mathematical concept has been reduced to some practical application rendering it 'useful'." *AT&T Corp. v. Excel Communications, Inc.*, 50 U.S.P.Q.2d 1447, 1451 (Fed. Cir. 1999) (Emphasis added.) Therefore, if a claim meets either the transformation and reduction test put forth by the Supreme Court, or if the claim, read as a whole and in light of the specification, produces any useful, concrete, and tangible result, the claim meets the statutory requirements of Section 101. *See id.*

Further, Appellants reiterate that the determination of whether a claim is directed to a practical application is determined from the context of the result and it is this result which is the focus of the analysis. *See State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 U.S.P.Q.2d 1596, 1601 (Fed. Cir. 1998). The claim need not include additional limitations or recitations directed to subsequent uses of the result so long as the result has a practical application or use. The Appellants understand that this

point has been acknowledged and clarified in the U.S. Patent and Trademark Office recently in the Memorandum titled “Clarification of Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility” dated April 12, 2007 and sent by John J. Love, Deputy Commissioner for Patent Examination Policy, to the Technology Center Directors. The Appellants respectfully refer the Board to this memo, a copy of which is attached herewith as Exhibit A, for clarification as to the proper procedure for evaluating subject matter eligibility.

With the foregoing in mind, Appellants respectfully assert that the independent claim 36, taken as a whole, recites statutory subject matter under 35 U.S.C. §101 because it produces a useful, concrete and tangible result. The present Application is directed to limiting the information transmitted between a remote operator workstation and a medical imaging system. *See* Abstract. Specifically, the present application discloses methods and apparatuses for preventing a remote operator from taking actions affecting an imaging site that the operator cannot visually observe, such as moving gantries, mechanical arms and so forth. *See*, Specification, p. 7, lines 9-15. In this way, different information or actions may be displayed to a local operator as opposed to a remote operator, i.e., different functionality is provided to an operator based on proximity to the imaging system. *See id.* at p. 10, line 15 to p. 11, line 4.

Accordingly, independent claim 36 recites, *inter alia*, “A method for limiting remote access to a medical imaging system comprising: differentiating functionality of a system user interface based on proximity of an operator workstation to a medical imaging device”. This claim, taken as a whole, recites a method for differentiating functionality of an interface based on proximity. This subject matter is not a mathematical algorithm, a natural phenomena, a law or principle of nature or other such concept which might be construed as abstract in nature. Instead, Appellants assert that the act of differentiating functionality of an interface based on proximity is a useful, concrete and tangible result. For example, such a differentiated interface may be used for controlling some functions of a medical imaging device at a distance, while not allowing other such functions to be

controlled at a distance. *Id.* Further, the claim itself, as noted above, does not have to recite any such uses.

For at least these reasons, Appellants respectfully submit that the rejection of claim 36 under Section 101 is improper. Accordingly, Appellants respectfully request the Board to reverse the rejection of independent claim 36 under 35 U.S.C. §101.

C. **Ground of Rejection No. 3:**

The Examiner rejected claims 1-5, 7, 8, 10-14, 16, 17, 19-33 and 37 under 35 U.S.C. §103(a) as being unpatentable over Miller in view of Lounsberry. Appellants respectfully traverse this rejection.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must show that a combination of references includes *all* of the claimed elements, *and* also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *See Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). Moreover, the Supreme Court has stated that the obviousness analysis should be explicit. *See KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350, page 14 (U.S., decided April 30, 2007). “[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See id.* (quoting *In re Kahn*, 441 F.3d 977,988 (Fed. Cir. 2006)). Further, the Examiner cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

No Prima Facie Case of Obviousness for Independent Claims 1, 7, 10, 16, 19, 28 and 37

With regard to the Miller reference relied upon by the Examiner, this reference relates to providing restricted access to controls (i.e., visual elements such as icons) of a graphical user interface based upon user authorization. Miller, Abstract; Figs. 5B, 6, and 7a; col. 1, lines 26-29, col. 2, lines 49-59, col. 3, lines 13-19, 32-44, col. 4, lines 7-16, 53-56, line 64 to col. 5, line 2; col. 7, lines 9-24, col. 8, lines 55-65. The Miller reference also describes terminal based authorization but such authorization is still within the context of limiting access to the secure controls to specific users. Miller, col. 3, lines 53-57, col. 4, lines 33-37, col. 9, lines 60-64, col. 10, lines 4-11. Indeed, the emphasis of the Miller reference on limiting access to displayed data based on user authorization is highlighted by the fact that the invention of the Miller reference can be implemented on “an independent workstation having no connection or communication with other computers or computer systems.” Miller col. 5, line 66 to col. 6, line 2. The Miller reference appears to be entirely silent as to the subject matter of limiting access to data or functionality based upon proximity, i.e., remote workstations displaying a different interface with a different functionality than what is displayed locally.

Independent Claims 1, 10, and 19

Conversely, independent claims 1, 10 and 19 recite, *inter alia*, the designation of limited remote access interface regions of a system user interface and the modification of these limited remote access interface regions in screen data sent to a remote operator workstation. Further, claim 1 also recites displaying the modified interface regions at a remote operator workstation such that the system user interface has functionality on a local workstation which is not enabled on a remote workstation. Unlike the teachings of the Miller reference, these claims are not limited in any way by user authorization, i.e., it is not simply a matter of the remote user signing in with an authorized account or providing a password. Instead, as plainly recited in these claims, the user interface has some functionality on the local workstation that is not enabled on the remote workstation.

That is, access is based on proximity, not user authorization. Contrary to the Examiner's analysis, this subject matter does not appear to be disclosed in the Miller reference.

For example, the Examiner indicates that the act of designating one or more interface regions of a system user interface as limited remote access interface regions is described in Figs. 7A and 7B of the Miller reference. These figures, however, appear to be entirely silent as to designating regions of a system interface for limited remote access. Likewise, the Examiner relies on Figs. 7A and 7B of the Miller reference as disclosing the act of modifying the limited remote access interface regions present in screen data sent to a remote operator workstation for display. Once again, however, these figures appear to be entirely silent as to modifying a remote interface region in screen data sent to a remote workstation. Indeed, as noted above, the Miller reference does not appear to differentiate in any way between local or remote workstations but instead is primarily focused on user authorization in controlling access. Indeed, as noted above, the invention of the Miller reference, including the steps depicted in Figs. 7A and 7B, can be implemented on a single workstation which is not in communication with any other computer or computer system. Miller, col. 5, line 66 to col. 6, line 2.

Further, the Examiner has indicated that the recited subject matter of a system user interface having functionality on the local operator workstation which is not enabled on the remote operator workstation is present in the Miller reference at Fig. 2, and at col. 5, line 65, and col. 8, lines 34-49. The cited passages do not show this subject matter and instead only demonstrate that the invention of the Miller reference can be implemented in a networked environment. As noted above, however, the Miller reference does not differentiate between local and remote communications, i.e., based on proximity, and instead focuses on user authorization. The cited passages in no way demonstrate the recited subject matter.

Further, the Lounsberry reference relied upon by the Examiner does not appear to obviate these deficiencies, nor does the Examiner allege otherwise. Therefore, in view of

these deficiencies in the Miller and Lounsberry references, no *prima facie* case of obviousness has been made with regard to independent claims 1, 10, and 19.

Reconsideration and allowance of independent claims 1, 10, and 19, and of those claims which depend from claims 1, 10, and 19, is therefore respectfully requested.

Independent Claims 7, 16, and 28

Independent claims 7, 16 and 28 recite, *inter alia*, the designation of limited remote access interface regions of a system user interface, the identification of restricted remote inputs in an input stream to a local system where the restricted remote input is generated at a remote workstation, and the removal of the restricted remote inputs from the input stream to prevent remote activation of an imaging system. As noted above, the recitations of these claims, unlike the teachings of the Miller reference, are not limited in any way by user authorization, i.e., it is not simply a matter of the remote user signing in with an authorized account or providing a password. In fact, in Miller the physical proximity of the user has no bearing on whether the user can sign in. Instead, as plainly recited in these claims, an input stream is modified to remove restricted remote inputs to prevent remote activation of a medical imaging system. That is, manipulation of the input stream is based on proximity, not user authorization. Contrary to the Examiner's analysis, this subject matter does not appear to be disclosed in the Miller reference.

As noted above, contrary to the Examiner's position, the act of designating one or more interface regions of a system user interface as limited remote access interface regions does not appear to be described in Figs. 7A and 7B of the Miller reference or elsewhere in the Miller reference. In addition, the Miller reference appears to be entirely silent as to the subject matter of identifying restricted inputs in an input stream to a local system and of removing the restricted inputs from the input stream, as recited in the present claims. Instead the technique described in the Miller reference prevents restricted inputs from being generated by obscuring a control such that the security control subclass "does not permit a user to interact with, or otherwise manipulate, the obscured data." Miller, Fig. 6, 7A, and 7B; col. 8, lines 41-45. Hence, no restricted remote inputs can be

generated (or, therefore, removed) in accordance with the teaching of the Miller reference. *Id.* As a consequence, the Miller reference also does not appear to disclose the removal of such restricted inputs from an input stream, as presently recited.

Further, the Lounsberry reference relied upon by the Examiner does not appear to obviate these deficiencies, nor does the Examiner allege otherwise. Therefore, in view of these deficiencies in the Miller and Lounsberry references, no *prima facie* case of obviousness has been made with regard to independent claims 7, 16 and 28. Reconsideration and allowance of independent claims 7, 16 and 28, and of those claims which depend from claims 7, 16 and 28, is therefore respectfully requested.

Independent Claim 37

Independent claim 37 recites, *inter alia*, a limited communication module configured to provide different functionality to the one or more local operator workstations and the remote operator workstation. Contrary to the Examiner's assertion, this subject matter does not appear to be disclosed at Fig. 5A or col. 8, lines 40-45 of the Miller reference. As noted above, the recitations of this claims, unlike the teachings of the Miller reference, are not limited in any way by user authorization, i.e., it is not simply a matter of a user signing in with an authorized account or providing a password to get the same functionality at a remote workstation as at a local workstation. Instead, as plainly recited in this claim, the limited communication module is configured to provide different functionality based on proximity, not user authorization, i.e., local and remote workstations are provided with different functionality.

Contrary to the Examiner's analysis, this subject matter does not appear to be disclosed in the Miller reference, which instead provides different functionality based on user authorization or password access. Miller, Abstract; Fig. 5B, 6, and 7a; col. 1, lines 26-29, col. 2, lines 49-59, col. 3, lines 13-19, 32-44, col. 4, lines 7-16, 53-56, line 64 to col. 5, line 2; col. 7, lines 9-24, col. 8, lines 55-65. To the extent that the Miller reference does contemplate control access based on terminal authorization, access is still generally

based upon what user is believed to be operating the terminal and, further, there is no indication that one terminal is more distant than another, i.e., proximity is not a factor. Miller, col. 3, lines 53-57, col. 4, lines 33-37, col. 9, lines 60-64, col. 10, lines 4-11. Indeed, as noted above and as explicitly stated in the Miller reference, the invention of the Miller reference can be implemented on a single computer that is not in communication with any other computer or computer system. Miller col. 5, line 66 to col. 6, line 2. This is entirely inconsistent with the present claims, including independent claim 37.

Further, the Lounsberry reference relied upon by the Examiner does not appear to obviate these deficiencies, nor does the Examiner allege otherwise. Therefore, in view of these deficiencies in the Miller and Lounsberry references, no *prima facie* case of obviousness has been made with regard to independent claim 37. Reconsideration and allowance of independent claim 37 is therefore respectfully requested.

D. **Ground of Rejection No. 4:**

The Examiner rejected claim 36 under 35 U.S.C. §103(a) as being unpatentable over Goertzel in view of Lounsberry. Appellants respectfully traverse this rejection.

No Prima Facie Case of Obviousness for Independent Claim 36

Appellants submit that the rejection of claim 36 is improper because the Goertzel reference, the Lounsberry reference or their hypothetical combination does not disclose or suggest the subject matter recited by independent claim 36.

The Goertzel reference is generally directed to the use of location of a connecting user in controlling access to network users. Goertzel, Abstract. In general, the less trusted the site where the user is accessing the network, the more restricted his or her access. *Id.* While the Goertzel reference discusses restricting network access based on location, it is generally virtual location that is the determinant, not spatial location, i.e.,

location as used in the Goertzel reference is a logical concept, not a physical or spatial descriptor. Goertzel, col. 5, lines 4- 25. To the extent that physical location is contemplated by Goertzel, it is still a surrogate measure for the trustworthiness or security of the site. Goertzel, col. 5, lines 26-30. As made clear in the Goertzel reference, proximity to the “local” site is not a factor in restricting access since, “a RAS 68₁, 68₂ dial-up user may be closer in physical distance than user at a remote office 64₁ connecting via a T1 line, even though the dial-up user will ordinarily be considered less secure. As such, as used herein, each location from which a user may connect is considered a virtual location rather than a physical place.” Goertzel, col. 5, lines 20-25 (Emphasis added.) Hence, the Goertzel reference, though contemplating the use of location in restricting network access, does not contemplate the actual use of proximity in implementing such restrictions but instead focuses on the trustworthiness or security of the access site.

Conversely, as noted above, independent claim 36 differentiates functionality of a system based on proximity to another system (here recited as a medical imaging device), not on arbitrary location, virtual or otherwise. Indeed, as clearly noted in the passage of the Goertzel reference quoted above, a physically closer system may be more severely restricted in accordance with the Goertzel reference because proximity is not the determinant. As such, the Goertzel reference does not disclose differentiating functionality of a system user interface based on proximity.

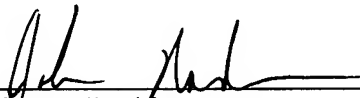
Further, the Lounsberry reference relied upon by the Examiner does not appear to obviate these deficiencies, nor does the Examiner allege otherwise. Therefore, in view of these deficiencies in the Goertzel and Lounsberry references, no *prima facie* case of obviousness has been made with regard to independent claim 36. Reconsideration and allowance of independent claim 36 is therefore respectfully requested.

Conclusion

Appellants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: September 5, 2007



John M. Rariden
Reg. No. 54,388
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

8. **APPENDIX OF CLAIMS ON APPEAL**

Listing of Claims:

1. A method for limiting remote display of a local system user interface, comprising:
designating one or more interface regions of a system user interface as limited remote access interface regions, wherein the system user interface controls the operation of a medical imaging system and is displayed on a local operator workstation;
modifying the limited remote access interface regions present in screen data sent to a remote operator workstation for display; and
displaying the modified interface regions at the remote operator workstation, wherein the modified interface regions visually differ when displayed from respective unmodified interface regions and wherein the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation.
2. The method as recited in claim 1, wherein each limited remote access regions is designated with one of two or more levels of remote access corresponding to different degrees of modification such that the differentially modified interface regions may be visually distinguished when displayed at the remote operator workstation.
3. The method as recited in claim 2, wherein one level of remote access corresponds to a modified interface region comprising a solid visual region when displayed such that no text or image is visible.
4. The method as recited in claim 2, wherein one level of remote access corresponds to a modified interface region comprising a visually obscured region when displayed through which text or images may be visible.

5. The method as recited in claim 4, wherein the visually obscured region comprises one or more of a hatching, a shading, and a tinting.

7. A method for limiting remote operation of a local system user interface, comprising:

designating one or more interface regions of a system user interface as limited remote access interface regions, wherein the system user interface controls the operation of a medical imaging system;

identifying one or more restricted remote inputs in an input stream to a local system using the system user interface, wherein the one or more restricted remote inputs are generated via interaction at a remote operator workstation with the one or more limited remote access interface regions; and

removing the one or more restricted remote inputs from the input stream to the local system, wherein removing the one or more restricted remote inputs prevents remote activation of the medical imaging system.

8. The method as recited in claim 7, wherein each limited remote access region is designated with one of two or more levels of remote access.

10. One or more computer readable storage media having a computer program stored thereon, the computer program, comprising:

a routine for designating one or more interface regions of a system user interface as limited remote access interface regions, wherein the system user interface controls the operation of a medical imaging system and is displayed on a local operator workstation; and

a routine for modifying the limited remote access interface regions present in screen data sent to a remote operator workstation for display, wherein the modified interface regions visually differ from respective unmodified interface regions when displayed and wherein the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation.

11. The one or more computer readable storage media as recited in claim 10, wherein the routine for designating designates each limited remote access region with one of two or more levels of remote access and wherein the routine for modifying modifies each limited remote access region based upon the designated level of remote access such that the differentially modified interface regions may be visually distinguished when displayed at the remote operator workstation.

12. The one or more computer readable storage media as recited in claim 11, wherein the routine for modifying modifies each interface region designated with a first level of remote access such that the modified interface regions comprise a solid visual region when displayed such that no text or image is visible.

13. The one or more computer readable storage media as recited in claim 11, wherein the routine for modifying modifies each interface region designated with a first level of remote access such that the modified interface regions comprise a visually obscured region when displayed through which text or images may be visible.

14. The one or more computer readable storage media as recited in claim 13, wherein the visually obscured region comprises one or more of a hatching, a shading, and a tinting.

16. One or more computer readable storage media having a computer program stored thereon, the computer program, comprising:

a routine for designating one or more interface regions of a system user interface as limited remote access interface regions, wherein the system user interface controls the operation of a medical imaging system;

a routine for identifying one or more restricted remote inputs in an input stream to a local system using the system user interface, wherein the one or more restricted remote

inputs are generated via interaction at a remote operator workstation with the one or more limited remote access interface regions; and

a routine for removing the one or more restricted remote inputs from the input stream to the local system, wherein removing the one or more restricted remote inputs prevents remote activation of the medical imaging system.

17. The one or more computer readable storage media as recited in claim 16, wherein the routine for designating designates each limited remote access region with one of two or more levels of remote access.

19. A remote viewing system for a medical imaging system, comprising:
a local medical imaging system, comprising:
an imager configured to detect one or more signals which may be converted into a physiological image;
one or more data acquisition circuits configured to receive and process the one or more signals from the imager;
one or more system control circuits configured to control one or more of the imager and the data acquisition circuits;
at least one local operator workstation configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices;
a remote operator workstation configured to receive at least the one or more processed signals via a network connection; and
a limited communication module located on at least one of the network connection or the local medical imaging system, wherein the limited communication module may be configured to designate one or more interface regions of a system user interface as limited remote access interface regions and wherein the system user interface controls the operation of the local medical imaging system and is displayed on the local operator workstation, and to modify the limited remote access interface regions present in screen data sent to the remote operator workstation such that the modified interface

regions visually differ from the respective unmodified interface regions when displayed and such that the system user interface has functionality on the local operator workstation which is not enabled on the remote operator workstation.

20. The remote viewing system as recited in claim 19, further comprising one or more data processing circuits configured to receive and further process the one or more signals from the one or more data acquisition circuits.

21. The remote viewing system as recited in claim 19, wherein the local medical imaging system comprises one of a CT imaging system, an MRI imaging system, a tomosynthesis system, an EBT imaging system, a PET imaging system, and a digital X-ray imaging system.

22. The remote viewing system as recited in claim 19, wherein the limited communication module comprises routines executed on at least one of the system control circuits and the local operator workstation.

23. The remote viewing system as recited in claim 19, wherein the limited communication module comprises routines executed by at least one server in the network connection.

24. The remote viewing system as recited in claim 19, wherein the limited communication module designates each limited remote access region with one of two or more levels of remote access and modifies each limited remote access region based upon the designated level of remote access such that the differentially modified interface regions may be visually distinguished when displayed at the remote operator workstation.

25. The remote viewing system as recited in claim 24, wherein the limited communication module modifies each interface region designated with a first level of

remote access such that the modified interface regions comprise a solid visual region when displayed such that no text or image is visible.

26. The remote viewing system as recited in claim 24, wherein the limited communication module modifies each interface region designated with a first level of remote access such that the modified interface regions comprise a visually obscured region when displayed through which text or images may be visible.

27. The remote viewing system as recited in claim 26, wherein the visually obscured region comprises one or more of a hatching, a shading, and a tinting.

28. A remote input system for a medical imaging system, comprising:
a local medical imaging system, comprising:
an imager configured to detect one or more signals which may be converted into a physiological image;
one or more data acquisition circuits configured to receive and process the one or more signals from the imager;
one or more system control circuits configured to control one or more of the imager and the data acquisition circuits;
at least one local operator workstation configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices;
a remote operator workstation configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits via a network connection; and
a limited communication module located on at least one of the network connection or the local medical imaging system, wherein the limited communication module may be configured to designate one or more interface regions of a system user interface as limited remote access interface regions, to identify one or more restricted remote inputs in an input stream to the local medical imaging system using the system

user interface, wherein the one or more restricted remote inputs are generated via interaction at the remote operator workstation with the one or more limited remote access interface regions, and to remove the one or more restricted remote inputs from the input stream to the local medical imaging system, wherein removing the one or more restricted remote inputs prevents remote activation of the local medical imaging system.

29. The remote input system as recited in claim 28, further comprising one or more data processing circuits configured to receive and further process the one or more signals from the one or more data acquisition circuits.

30. The remote input system as recited in claim 28, wherein the local medical imaging system comprises one of a CT imaging system, an MRI imaging system, a tomosynthesis system, an EBT imaging system, a PET imaging system, and a digital X-ray imaging system.

31. The remote input system as recited in claim 28, wherein the limited communication module comprises routines executed on at least one of the system control circuits and the local operator workstation.

32. The remote input system as recited in claim 28, wherein the limited communication module comprises routines executed by at least one server in the network connection.

33. The remote input system as recited in claim 28, wherein the limited communication module designates each limited remote access region with one of two or more levels of remote access.

36. A method for limiting remote access to a medical imaging system comprising:

differentiating functionality of a system user interface based on proximity of an operator workstation to a medical imaging device.

37. A remote access system for a medical imaging system, comprising:
a local medical imaging system, comprising:
an imager configured to detect one or more signals which may be converted into a physiological image;
one or more data acquisition circuits configured to receive and process the one or more signals from the imager;
one or more system control circuits configured to control one or more of the imager and the data acquisition circuits;
one or more local operator workstations configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits and with one or more memory devices;
a remote operator workstation configured to receive at least the one or more processed signals and to communicate with the one or more system control circuits via a network connection; and
a limited communication module configured to provide different functionality to the one or more local operator workstations and the remote operator workstation.

9. **APPENDIX OF EVIDENCE**

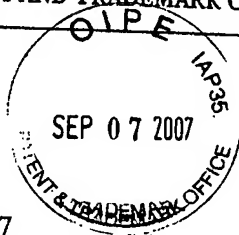
1. Exhibit A: Memorandum from John J. Love, Deputy Commissioner for Patent Examination Policy, United States Patent and Trademark Office, dated April 12, 2007. Subject: Clarification of Interim Guidelines For Examination of Patent Applications for Subject Matter Eligibility.

10. **APPENDIX OF RELATED PROCEEDINGS**

None.



UNITED STATES PATENT AND TRADEMARK OFFICE



COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

MEMORANDUM

DATE: April 12, 2007
TO: Technology Center Directors
FROM: John J. Love *JJL*
Deputy Commissioner
For Patent Examination Policy
SUBJECT: Clarification of Interim Guidelines For Examination of Patent Applications
for Subject Matter Eligibility

Certain inconsistencies have come to my attention in the application of the Interim Guidelines For Examination of Patent Applications for Subject Matter Eligibility, which are set forth in section 2106 of the Manual of Patent Examining Procedure (8th Ed. Rev. 5, Aug. 2006) (MPEP). The situation arises in the context of whether or not a claim is for a practical application of an abstract idea, law of nature, or natural phenomenon. As stated in the Interim Guidelines, a claim is for a practical application of an abstract idea, law of nature, or natural phenomenon when the claimed invention "transforms" an article or physical object to a different state or thing, or when the claimed invention produces a useful, concrete and tangible result. See MPEP 2106, subsection IV.C.2.

Focus on Result

A practical application in this context can be the result itself, and does not require that steps or additional limitations be added to the claim. As stated in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998):

Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"-- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

It is the result that should be the focus. If the result has a real world practical application/use, then the test has been satisfied. The claim need not include the uses to which the result is ultimately put, just the result itself. Another example would be an improved method for measuring blood sugar levels in human beings. In this example, the end result is the blood sugar level which is a practical application for diagnostic purposes. Accordingly, reciting the improved method, and the result it achieves---the measurement of the blood sugar level---is all that is necessary for patent-eligibility. The diagnostic steps that occur after the determination of the blood sugar level need not necessarily be present in the claims in order for the claims to be statutory.

Use of Specific Terminology

Another area of inconsistency surrounds the use of the terms such as “determining,” “calculating,” and similar expressions. Some object to these as not creating a tangible result. Such terms may in fact be sufficient to establish a tangible result. *See, e.g., State Street*, 149 F.3d at 1375, 47 USPQ2d at 1602 (holding the calculation of a number having a real world value and to be a “useful, concrete, and tangible result”) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999) (holding a method claim including the generation of a message record for an interexchange call to be statutory). The specification should be referred to for a meaning of the terms. *See In re Musgrave*, 431 F.2d 882, 893, 167 USPQ 280, 289 (CCPA 1970) (“[w]e cannot agree with the board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think. . . .”).